Facility/Address	Zip Code	RUCA Code	Phone Number
DOCTOR'S MEMORIAL HOSPITAL **HOLMES COUNTY** 401 East Byrd Bonifay, FL	32425	9.0	(850) 547-1120
CAMPBELLTON-GRACEVILLE HOSPITAL **JACKSON COUNTY** 5429 College Drive Graceville, FL	32440	10.6	(850) 263-4431
JACKSON HOSPITAL **JACKSON COUNTY** 4250 Hospital Drive Marianna, FL	32446	8.0	(850) 526-2200
MADISON COUNTY MEMORIAL HOSPITAL **MADISON COUNTY** 309 NE Marion Street Madison, FL	32340	7.0	(850) 973-2271
DOCTOR'S MEMORIAL HOSPITAL, INC. **TAYLOR COUNTY** 333 N. Byron Butler Parkway Perry, FL	32348	7.0	(850) 584-0800

Table 3. Hospitals and Clinics in Second Year Implementation Plan, with RUCA Code

Calhoun County Clinics Addresses
TALLAHASSEE MEMORIAL FAMILY MEDICINE 17808 N.E. Charley Johns Street Blountstown, FL
THE MEDICAL CENTER AT BLOUNTSTOWN 20454 NE Finlay Ave Blountstown, FL

Franklin County N. FL Medical Center and Clinics Addresses	Zip Code	RUCA Code	Phone Number
NORTH FLORIDA MEDICAL CENTERS **EASTPOINT MEDICAL CENTER** 35 Island Drive Suite 14 Eastpoint, FL	32328	7.0	(850)670-8585
BAYLINE MEDICAL CENTER 102 SE Avenue B Carrabelle, FL	32322	10.6	(850) 697-2223
MAGNOLIA MEDICAL CLINIC 116 Avenue East Apalachicola, FL	32320	7.0	(850) 653-2935

Gulf County N. FL Medical Center and Clinics Address	Zip Code	RUCA Code	Phone Number
NORTH FLORIDA MEDICAL CENTERS			
WEWAHITCHKA MEDICAL CENTER 255 West River Road Wewahitchka, FL	32465	10.4	(850)639-5828
ST. JOSEPH CARE OF FLORIDA, INC. 2475 Garrison Avenue Port St. Joe, FL	32456	7.3	(850) 227-1276 x 103
CYPRESS MEDICAL CLINIC 118 North Highway 71 Wewahitchka, FL	32465	10.4	(850) 639-2376
GULF PINES MEDICAL 102 20th Street Port Saint Joe , FL	32456	7.3	(850) 229-8979
SHORELINE MEDICAL GROUP 419 Baltzell Avenue Port Saint Joe , FL	32456	7.3	(850) 670-8585

Holmes County Clinics Addresses	Zip Code	RUCA Code	Phone Number
AHMAD TARIQ ISMAIL 110 East Byrd Street Bonifay, FL	32425	9.0	(850) 547-4799
IKRAM U QURESHI MD 812 South Weeks Street Bonifay, FL	32425	9.0	(850) 638-4718
MOHAMMAD YUNGUS MD RURAL HEALTH CARE 404 East Highway 90 Bonifay, FL	32425	9.0	(850) 547-4284

Jackson County Clinics Addresses	Zip Code	RUCA Code	Phone Number
INTERNAL MEDICINE ASSOCIATES 4318 Fifth Avenue Marianna, FL	32446	8.0	(850) 526-5300
NORTH FLORIDA PEDIATRICS RHC 4316 5th Avenue Marianna, FL	32446	8.0	(850) 526-5437
NORTH FLORIDA PEDIATRICS-SNEADS 7997 Highway 90 Sneads, FL	32460	10.6	(850) 593-5437

Madison County N. FL Medical Center and Clinics Addresses	Zip Code	RUCA Code	Phone Number
NORTH FLORIDA MEDICAL CENTERS			
TRI-COUNTY FAMILY HEALTH CARE 193 NW US 221 Greenville, FL	32331	10.0	(850)948-2840
FOUR FREEDOMS HEALTH SERVICES 194 NE Hancock Ave Madison, FL	32340	7.0	(850) 973-8851
MADISON MEMORIAL HEALTHCARE CENTER 309 NE Marion St Madison, FL	32340	7.0	(850) 973-1366
PEDIATRIC AND INTERNAL MEDICINE 104 East Dade Street Madison, FL	32340	7.0	(850) 973-4195
MADISON COUNTY MEMORIAL HOSPITAL 309 NE Marion Street Madison, FL	32340	7.0	(850) 973-2271

Taylor County N. FL Medical Center and Clinics Addresses	Zip Code	RUCA Code	Phone Number
NORTH FLORIDA MEDICAL CENTERS			
TAYLOR DENTAL CENTER 409 East Ash Street Perry, FL	32347	7.0	(850)223-2578
DOCTOR'S MEMORIAL FAMILY PRACTICE 1701 South Jefferson Street Perry, FL	32348	7.0	(850) 584-0885
DOCTOR'S MEMORIAL HOSPITAL RHC 1706 South Jefferson Street Perry, FL	32347	7.0	(850) 498-0822
DOCTOR'S MEMORIAL HOSPITAL-EMERGENCY 409A East Ash Street Perry, FL	32347	7.0	(850) 584-0839
DOCTOR'S MEMORIAL INTERNAL MEDICINE 402 East Ash Street Perry, FL	32347	7.0	(850) 584-0600
STEINHATCHEE FAMILY CENTER 1209 1st Avenue South Steinhatchee, FL	32359	8.0	(352) 498-5888
WOMENS HEALTH CTR. OF NORTH FLORIDA 1702 S. Jefferson Street Perry, FL	32348	7.0	(850) 223-1744

8) Indicate previous experience in developing and managing telemedicine programs.

A number of the Pilot project stakeholders have an extensive background in delivering telehealth programs to patients in the community. These include Children's Medical Services, Nemours, the FSU College of Medicine and the Community Health Informatics Organization. A second set of stakeholders have expertise in delivering health care network services to providers in the community, or are developing the telecommunication infrastructure to provide these services. These include the Big Bend RHIO, the Escambia HIN, the Florida LambdaRail

and the Florida Health Information Network. A third set of stakeholders are actively seeking telehealth services for the provision of patient care. These include all of the community health organizations working to implement the broadband network in the rural areas of north Florida.

Children's Medical Services, Florida Department of Health

Children's Medical Services in the Florida Department of Health provides services in child protection and clinical care through the creative use of telehealth technology. The effective use of advanced telecommunications technology eliminates barriers to the provision of health care for children who have special health care needs or who suffer abuse or neglect. Access to specialty care for the child, patient and family education and ongoing support are all enhanced through this technology. Children's Medical Services uses telecommunications and information technology to provide clinical pediatric care across geographic distances and to transmit the information needed to provide that care. The system is used to reduce the number of children who need transportation for evaluation, to expedite child safety decisions and to increase training opportunities for local health care providers.

The State of Florida, Department of Health has two Divisions of Children's Medical Services (CMS), the 'CMS Network and Related Programs' (CMSN) and the 'CMS Preventions and Interventions' (P&I) divisions. The CMSN division provides a variety of health care services to CMSN-enrolled children. The P&I division includes the Child Protection Team (CPT) program, which provides multidisciplinary child abuse services, and the Drug Endangered Children program. Both CMS divisions include a number of facilities in various locations throughout Florida. Both divisions provide access to medical services to children with special health care needs and both have unique operational requirements and opportunities for participation.

The CMSN program can provide its services to all of the rural hospitals included in the proposal, by implementing a telemedicine system (to include the two-way interactive videoconference system and peripheral camera equipment) in a CMSN facility in North Florida. Since the CMSN offices use State of Florida network services (as do most State health care facilities), this would provide eligible children at each of the rural hospitals involved in the grant access to a variety of physicians and services from CMSN facilities. It would also provide an opportunity to evaluate interoperability between a site on the State's network and sites on the proposed new AHCA Rural Broadband Network.

The CMS P&I division can be used to provide access to multidisciplinary child abuse evaluation services by implementing a telemedicine system (to include the two-way interactive videoconference system, peripheral camera and associated computer equipment) for a P&I facility in North Florida. This equipment can be placed either at a CPT hub site or at a specialist facility and could be used in association with the Drug Endangered Children program. Either approach can utilize the AHCA Rural Broadband Network and would provide children at any of the rural hospitals access to physicians and services from a CMS P&I program. Participation by both CMS divisions presents an opportunity to utilize and evaluate the capability of the proposed AHCA Rural Broadband Network to provide special health care services to children.

Nemours

The Nemours children's health system has a strong interest in the pediatric aspects of the rural network. Nemours is currently working under a federal grant to pilot the remote monitoring of children with chronic diseases such as diabetes and asthma. Nemours is using this network as an opportunity to expand remote pediatric monitoring in schools, at home, and in other group settings like daycare centers. It also presents the opportunity to provide subspecialty consultations to primary care physicians and federally qualified health centers that may not have

a particular specialist on staff, consultations with hospitals and other types of telemedicine services that would link with the pediatric specialists at Nemours.

The Florida State University College of Medicine

The Florida State University College of Medicine (College) currently has the ability for video teleconferencing, web-casting, online CME courses and on-site CME courses. From its inception, the COM has been committed to serving rural populations. The College's mission specifically states that the COM "will educate and develop exemplary physicians who practice patient-centered health care, discover and advance knowledge, and are responsive to community needs, especially through service to elder, *rural*, minority, and underserved populations."

The College has developed a network of community-based physicians throughout the state and has a strong contingent of practicing doctors within the proposed project area. In addition, the College has a dedicated rural track in Marianna, Florida. In order to fulfill the mission, the College conducts faculty development and continuing education courses with the community faculty. Many of the community providers have to close their practice and travel to metropolitan areas to get the continuing education necessary to stay current and fulfill licensure requirements. This results in loss of income to the provider and loss of services to the community for that time period. By providing more easily accessible continuing education programs physicians will be able to keep their practice open resulting in better access to health care in the communities.

The College is also affiliated with the Medical Education Council of Pensacola (MECOP) who provides the continuing medical education credit. Through these various programs the College has developed both a strong relationship with the community faculty and a comprehensive understanding of the educational needs of health professionals serving in rural communities. If these rural communities had the equipment, and funding for the programming was available, the health professionals serving in those rural communities would not have to travel, could receive more training, and provide more comprehensive services than they are currently able to do.

The Community Health Informatics Organization

The Community Health Informatics Organization is a community-based not-for-profit organization that incorporates the delivery of health care services, disease management and chronic illness treatment programs. These services are performed in concert with industry leaders in data sharing technologies. In addition to providing a solution for electronically generating health care data and providing an electronic platform for many provider facilities to view, the Community Health Informatics Organization is implementing a community-based telehealth program which will include the development of a community data repository. This repository will be available to provide data feeds to Regional Health Information Organizations and the Florida Health Information Network. The Community Health Informatics Organization allows early intervention and continuing care through routine measuring, recording and transmission of personal health data to local medical practices. Through this service, chronic disease conditions can be monitored at home and will become an integral part of at home health care.

The Big Bend Regional Healthcare Information Organization

The Big Bend RHIO was officially formed in January 2005. Dan Kaelin, M.D. of Vascular Surgery Associates serves as Chairman to the Big Bend RHIO. Mark O'Bryant, CEO of Tallahassee Memorial Hospital, and Sharon Roush, CEO of Capital Regional Medical Center both serve as Vice Chairs while Allen Byington of ElectroNet serves as interim executive

director. Representatives from key community stakeholders make up the 15 Board of Directors that guide and provide governance for Big Bend RHIO initiatives.

The Big Bend RHIO is a (not-for-profit application filed) Florida corporation that leads the community in delivering an enhanced level of patient centered care. The Big Bend RHIO plans to provide support and services to the 20 surrounding rural counties, six of which are in South Georgia. The stakeholders in these counties will benefit from the improvements and efficiencies created by the Big Bend RHIO efforts. The Big Bend RHIO is also working on applications that will facilitate and support patient participation in managing their electronic health records.

Big Bend RHIO initiatives involve every major component of the local and rural health care systems from physician's offices to HMO's to hospitals, laboratories and pharmacies. The Big Bend RHIO is putting the Florida Big Bend region ahead of the curve and on the map in the delivery of safer, more cost-effective health care and creating a model for other communities seeking to control the cost and improve the quality of their health care.

The Big Bend RHIO has twice been funded by the Florida Health Information Network grants program to demonstrate a prototype for a regional health information network, which will be integral to the building of a state-level Florida Health Information Network. The project architecture will provide a regional master patient index system needed to accurately identify patients, a record locator service to provide practitioners with patient information from disparate systems, secure physician messaging, e-Prescribing, secure electronic referrals and a standardized patient intake form which will also serve as a secure personal health record for patients. The project is scheduled to be operational by June 2007.

ElectroNet Intermedia Consulting

The Big Bend RHIO has also leveraged the resources of ElectroNet Intermedia Consulting, founded in 1996 as a data provider and becoming a competitive local exchange carrier in1998. ElectroNet started as a dialup provider, in 1998 transitioned to facilities based DSL and began building Metro Ethernet in 2003. ElectroNet's engineering staff has been directly responsible for the design, engineering and construction supervision for the build out of over 100 miles of aerial and underground fiber facilities. ElectroNet is now deploying business class broadband voice services to its DSL and Metro Ethernet customers.

ElectroNet identified and began implementing a business model where sustainability has truly been achieved and ongoing since late 2004. The model leverages the specific needs of health care providers and the private sector to subsidize and support each other. ElectroNet constructed a gigabit Metro Ethernet broadband network to serve those specific needs. The network has become known as the private Medical Area Network or pMAN. The pMAN began by connecting several providers to facilitate the transfer of radiological images. The network provides radiologists with real-time access to images from multiple locations and multiple imaging centers. The network now provides secure inter office transport for providers with multiple locations, Internet access with centralized VPN, firewall, security and intrusion detection and is the platform for the Big Bend RHIO RHIN project. To further enhance security only legitimate health care organizations are connected to the pMAN portion of the network.

The partnership between ElectroNet and the Big Bend RHIO has created an environment where the Big Bend RHIO can provide its suite of services over the pMAN infrastructure at a very low cost with minimal to no capital expense. This model has created a significant value to the Big Bend RHIO and its stakeholders and will provide for accelerated Big Bend RHIO sustainability. All of the services provided by ElectroNet to the Big Bend RHIO have been in-kind.

The Escambia Health Information Network

The Escambia HIN project has three goals. Its first goal is to create infrastructure for a community-wide electronic health information network that links safety net providers and supports data collection about a target group of patients who are poor and uninsured. The second goal is to identify software systems that facilitate data integration between non-affiliated providers and enable participants to view integrated data in a secure manner to improve health care delivery. A third goal is to expand operation of the shared data network to include Escambia, Santa Rosa, Okaloosa, and Walton counties. Community providers have come together in new ways to build the Escambia HIN system and sustain its operation. Participants include medical directors, care managers, clinicians, planners, executives, pharmacists, IT professionals, volunteers, security officers, lawyers and others from across the partner organizations.

Escambia HIN is also working with a telemedicine system. One of its participants, Sacred Heart Health System in Pensacola, Florida, is using a videoconferencing link developed by ReachMD Consult to assess stroke victims in the surrounding rural counties. The technology system allows physicians at Sacred Heart to assess a stroke patient and to recommend treatment at a local hospital or transfer to Pensacola.

Florida LambdaRail

Florida LambdaRail is a high speed optical network that spans the state, owned by a consortium of ten public and private universities whose mission is research, education and economic development. Broadband delivery of telehealth programs is exactly the type of service that was intended for Florida LambdaRail. Within the state of Florida, the Florida LambdaRail provides connectivity through its infrastructure to three of the four major medical educational institutions. The Florida LambdaRail connects to the National LambdaRail (NLR) and Internet2 network infrastructures, which includes approximately 200 major institutions and several major research institutions in the United States. Additionally, the Florida LambdaRail has connectivity to 25 other state and regional networks, providing even more infrastructure to the national backbones.

The optical fiber backbone for the Florida LambdaRail runs along Interstate 10 in northern Florida, and it is well covered in the rest of the state. With this optical fiber backbone in place, the rural broadband project can tap into the Florida LambdaRail to provide for more on/off ramps for connectivity. The Florida LambdaRail in partnership with the Big Bend RHIO is working on a strategy to install the last mile of connectivity to the rural communities and their hospitals. Since the Florida LambdaRail is connected internationally through the National LambdaRail's PacketNet, which is equivalent in kind to the Internet2 network, rural providers can reach the rest of the world through Chicago, New York, Washington, D.C., or the Pacific Northwest in Seattle. Florida LambdaRail could also connect to the state of Georgia's PeachNet, which runs through Tallahassee, Florida. The Georgia TeleStroke program could then be made available to patients in rural Florida via the PeachNet. The Florida LambdaRail is both local and global in scope and has a significant role in this project.

Florida Health Information Network, Agency for Health Care Administration

The Florida Health Information Network intends to provide connectivity to every provider in the State through the Regional Health Information Organizations. The real value of a health information network is in creating an exchange that has all of the essential health care data that providers need at the point of care. It is essential for rural health care to have the rural hospitals connected to the Florida Health Information Network, especially in counties where there is very little broadband or limited access and limited connectivity. Providing connectivity solutions for the hospitals and the clinics, and bringing them into the health information exchange is one of

the functions of the Florida Health Information Network because The Florida Health Information Network intends to connect the nine rural hospitals in this proposal through the Big Bend RHIO, which will provide them the clinical messaging and other services that the Big Bend RHIO can deliver. This should create an immediate benefit to all of the rural providers, the clinicians and the patients in the rural counties. If patients in the rural areas can stay at home, yet interact with a specialist without having to travel, then that would be in the best interest of health care for patients across the state. The goal of connectivity in the Florida Health Information Network will be achieved by working with the Big Bend RHIO and the Escambia HIN to bring rural hospitals into the network.

9) Provide a project management plan outlining the project's leadership and management structure, as well as its work plan, schedule, and budget.

The Big Bend RHIO will be responsible for administering the funding provided by the Universal Services Fund to support the proposed project. The Agency for Health Care Administration will be responsible for the oversight of the contract and the project, and will act as a point of contact with the Big Bend RHIO to the Universal Service Administrative Company (USAC).

In preparation of this proposal, the Agency has assembled an initial project management team consisting of the following representatives:

- Agency for Health Care Administration Florida Center for Health Information and Policy Analysis, Office of Health Information Technology – Administrator
- Big Bend Regional Healthcare Information Organizations (Big Bend RHIO) – Executive Director
- Florida LambdaRail – Chief Executive Officer
- Florida Department of Health Office of Rural Health – Administrator
- Florida Hospital Association – Vice President

The management team will have direct oversight of the project for the duration of the program. The project management team has assigned Florida LambdaRail as the backhaul broadband carrier for the pilot project. Florida LambdaRail, Big Bend RHIO and the Agency for Health Care Administration will assign the design, engineering and installation of the optical fiber network to Electronet Intermedia Consulting. The Big Bend RHIO will be primarily responsible for the infrastructure assessment with assistance from the Agency.

The Agency will coordinate project committees, meetings, and maintain a public project webpage on the Agency's website. The Agency will prepare a project evaluation which will be made available to USAC and the Federal Communications Commission.

In addition to the project management team, a stakeholder collaborative will be created. The collaborative is composed of member organizations from the original work group who participated in the vision and development of the project and proposal. The coalition has been expanded to include representation from key rural community economic development organizations at the state and local levels. The coalition will provide the management team with guidance and technical assistance relating to the mission and objectives of the program and assist in sustainability. Following is a directory of the stakeholder collaborative membership:

Rural Health Broadband Stakeholders Collaborative Membership

The Rural Health Broadband Stakeholders Collaborative will provide project oversight, technical expertise, and support. It is comprised of members providing knowledge and capability in all the

critical sectors of regional rural health, telecommunications, and community economic development. A listing of stakeholders is shown in Table 3.

Table 4. Rural Broadband Pilot Project Stakeholders

Organization	Area of Expertise
Agency for Health Care Administration	State agency responsible for developing the state-wide health information exchange
Big Bend Regional Health Information Organization (Big Bend RHIO)	Health care information and telemedicine/telehealth infrastructure
Escambia Health Information Network (Escambia HIN)	Health care information infrastructure
Florida LambdaRail	Network infrastructure, Internet2, state and national backhaul network connectivity
Electronet Intermedia Consulting	Network design, engineering, construction and management
Florida State University College of Medicine	Rural health care, health needs, physician/medical, aging/gerontology, research/evaluation
Nemours Children's Clinic	Children's medical and social services
Children's Medical Services, Florida Department of Health	Children's Medical Services, Emergency Medical Services, special technologies, planning, evaluation and public health, data support.
Office of Rural Health, Florida Department of Health	Development of rural hospitals and health care facilities
Community Health Informatics Organization (CHIO).	Last mile, in-home telemedicine/telehealth
North Florida Medical Centers	Network of rural community health centers
Big Bend Rural Health Network	Network of rural health and social service providers
County Rural Hospitals	Participating rural hospitals
Florida Association of Community Health Centers	Support for regional federally qualified health centers
Florida Medical Association	Physician services and support
Florida Hospital Association	Hospital services and support
Florida Department of Management Services	Network connectivity to statewide Florida Net

Organization	Area of Expertise
City of Port St. Joe	Impacted rural community, health care quality, economic development
Progress Energy	Network infrastructure support and connectivity
WorkForce Florida	Rural workforce/employment/education
Office of the Governor – Office of Tourism, Trade, and Economic Development and Rural Economic Development Initiative	Statewide Rural community economic development
Enterprise Florida	Statewide rural community economic/business development
Opportunity Florida	North Florida regional economic development council serving project area.
Florida's Great Northwest	North Florida regional economic/business development

The project management team will be responsible to:

- Conduct infrastructure planning which follows a telecommunications lifecycle development model.
- Implement an infrastructure assessment in partnership with the Big Bend RHIO.
- Develop and implement the telemedicine and telehealth program components.
- Design evaluation instruments and implement an evaluation plan.
- Provide in-field technical support to participating rural health care providers including rural hospitals, clinics, and physician practices.
- Create a public project Web site providing participant access to supporting resources.
- Coordinate regular stakeholder collaborative meetings.
- Coordinate and prepare project deliverables including progress and evaluation reports to the USAC and the Federal Communications Commission.

Work Plan for Project Completion

The work plan for the pilot project is shown in Table 5. The nine rural hospitals, the Big Bend RHIO and the Escambia HIN should be connected by June 2008.

Table 5. Timetable for the Rural Broadband Pilot Project

Implementation Tasks & Milestones	Expected Start Date
1. Execute necessary pole attachment agreements.	July, 2007
2. Procure preconfigured POP structures.	July, 2007
a. Receive POP structures.	July, 2007
3. Identify and secure POP locations in Perry and Madison.	July, 2007
4. Engineer fiber construction route from Florida LambdaRail (FLR) Taylor and Madison County amplifier sites to planned POP in Perry and Madison.	July, 2007
5. Submit permit applications and engineering to appropriate authorities for Perry and Madison.	July, 2007
6. Receive permits for Taylor and Madison and begin construction of network.	August, 2007
a. Install POP structures.	August, 2007
b. Construct fiber from Madison POP to Madison County Memorial Hospital and FLR amplifier site. Construct fiber from Perry POP to Doctor's Memorial Hospital and Perry FLR amplifier site.	August, 2007
c. Provision, test and commission all network facilities for Madison and Perry.	August, 2007
7. Engineer fiber construction route from Florida LambdaRail Tallahassee to planned POP in Quincy.	September, 2007
8. Identify and secure POP location in Quincy.	September, 2007
9. Submit permit applications and engineering to appropriate authorities for Gadsden County.	September, 2007
10. Receive permits for Quincy and begin construction of network.	October, 2007
a. Install POP Structure.	October, 2007
b. Construct fiber from FLR Tallahassee, to Quincy POP.	October, 2007

Implementation Tasks & Milestones	Expected Start Date
c. Provision, test and commission all network facilities for Quincy.	October, 2007
11. Engineer fiber construction route from FLR Clarksville amplifier site in Calhoun County to planned POP and Calhoun Liberty Hospital in Blountstown.	October, 2007
12. Identify and secure POP location for Blountstown.	October, 2007
13. Submit permit applications and engineering to appropriate authorities for Blountstown.	October, 2007
14. Receive permits for Blountstown and begin construction of network.	November, 2007
a. Install POP structure.	November, 2007
b. Construct fiber from POP to Calhoun Liberty Hospital and FLR Clarksville amplifier site.	November, 2007
15. Engineer fiber construction route from Blountstown POP to planned POPs and hospitals in Bonifay, Graceville and Marianna.	November, 2007
16. Identify and secure POP locations for Bonifay, Graceville and Marianna.	November, 2007
17. Submit permit applications and engineering to appropriate authorities for Bonifay, Graceville and Marianna.	November, 2007
18. Receive permits for Bonifay, Graceville, Marianna and begin construction of network.	December, 2007
a. Install POP structures.	December, 2007
b. Construct fiber from Blountstown POP to Marianna POP, Marianna POP to Graceville POP and from closest Graceville route to Bonifay POP. Construct fiber from Marianna POP to Jackson Hospital, from Graceville POP Campbellton-Graceville Hospital and from Bonifay POP to Doctor's Memorial Hospital.	December, 2007
c. Provision, test and commission all network facilities for Blountstown, Marianna, Graceville and Bonifay.	January, 2008
19. Engineer fiber construction route from FLR Clarksville amplifier site in Calhoun County to planned POP in Port St. Joe and from Port St. Joe POP to Apalachicola POP.	February, 2008

Implementation Tasks & Milestones	Expected Start Date
20. Submit permit applications and engineering to appropriate authorities for Port St. Joe and Apalachicola.	February, 2008
21. Identify and secure POP locations for Apalachicola and Port St. Joe.	February, 2008
22. Receive permits for Apalachicola, Port St. Joe and begin construction of network.	March, 2008
a. Install POP structures.	March, 2008
b. Construct fiber from FLR Clarksville amplifier site to Port St. Joe POP and Apalachicola POP. Construct fiber from Port St. Joe POP to Sacred Heart Hospital and from Apalachicola POP to George Weems Memorial Hospital.	March, 2008
c. Provision, test and commission all network facilities for Apalachicola and Port St. Joe.	May, 2008
23. Submit permit applications and engineering to appropriate authorities for Pensacola.	May, 2008
24. Receive permits for Pensacola and begin construction of network.	May, 2008
a. Construct fiber from FLR Pensacola amplifier site to Sacred Heart Hospital.	June, 2008
22. Project complete.	June 2008

Budget, Project Year 1 – 2007-2008

The projected costs for the rural broadband pilot project in the first year are $9,099,931 for construction of the gigabit optical fiber network, with $555,157 in monthly recurring costs. The cost of videoconferencing equipment for each of the nine hospitals and the two Children's Medical Services clinics is $549,031. Recurring costs for the year add up to $555,157. The total cost estimated for the pilot project in the first year is $10,204,119. The cost of construction is based on the infrastructure telecommunications systems, hardware necessary to use the infrastructure (e.g., servers, telehealth peripheral devices), software necessary to use the hardware and the cost of constructing the network. The budget for the first year construction is shown in Table 5, and the budget for first year monthly recurring costs is shown in Table 6. The budget for videoconferencing equipment in the first year is shown in Table 7.

Table 6. Rural Broadband Pilot Project Construction Costs for the First Year, 2007-2008

Project Name	Fiber Construction *	Point of Presence Equipment**	Total Broadband Construction
LambdaRail ILA Equipment upgrades***			$695,230
BBRHIO RHIN to TLH Florida LambdaRail	$63,000	$80,000	$143,000
Gadsden Community to TLH LambdaRail	$523,700	$70,000	$593,700
Madison County ILA to Madison Memorial Hospital	$74,136	$70,000	$144,136
Perry ILA to Doctor's Memorial Hospital	$203,036	$70,000	$273,036
Clarksville ILA to Calhoun Liberty Hospital	$248,244	$70,000	$318,244
Clarksville ILA to Jackson County Hospital	$888,700	$70,000	$958,700
Jackson County Hospital to Bonifay Doctor's Hospital	$856,760	$70,000	$926,760
Campbellton to Graceville Hospital	$459,812	$70,000	$529,812
Clarksville ILA to Apalachicola, George Weems	$2,565,920	$70,000	$2,635,920
Port St. Joe (tap along Apalachicola route)	$30,000	$70,000	$100,000
Escambia HIN via Baptist Hospital in Escambia County	$326,400		$326,400
WI-MAX access point in each community	$30,000	$450,000	$480,000
Sub Totals	$5,913,308	$1,160,000	$8,124,938
12% budget margin			$974,993
Total First Year Construction Cost			**$9,099,931**

Table 7. Recurring Costs in Year One

Recurring Costs Year 1	ARC	MRC	Annual Cost
Project Management	$225,000	$18,750	$225,000
Network Provisioning	$75,000	$6,250	$75,000
Administrative Support	$40,000	$3,333	$40,000
POP Utilities		$2,250	$27,000
POP Insurance		$1,575	$18,900
Outside Plant Management	$30,000	$2,500	$30,000
Meeting With Local/State Utilities		$500	$6,000
Underground Locations Requests		$350	$4,200
Underground Locations		$500	$6,000
Pre-Construction Meeting With Local/State Utilities (2) Monthly		$1,049	$12,588
Pole Attachment Fees, estimated 1st year ramp up @ $25.00 per pole	$60,000	$5,000	$60,000
Sub Total		$42,057	$504,688
10% Budget Margin		$4,206	$50,469
Total Monthly Recurring Cost		**$46,263**	**$555,157**

Table 8. Rural Broadband Pilot Project Videoconference Equipment Costs for the First Year

Videoconferencing Equipment	Cost
General Examination Camera - NTSC video format	$5,500
Digital Electronic Stethoscope	$2,995
12 Lead Interpretive ECG for PC (Software and Hardware)	$3,990
Digital Spirometer for PC	$1,800
X-ray Scanner	$22,000
Vital Signs Monitor (Can connect to Electronic Medical Record system)	$1,767
Desk top video conferencing kit, camera and software	$360
Mobile cart	$2,500
Additional software and installation	$9,000
Total First Year Videoconferencing Cost per Hospital	$49,912
Total First Year Cost, All Hospitals	$549,031

Budget, Project Year 2 – 2008-2009

The projected cost for the rural broadband pilot project in the second year is $1,117,080 in monthly recurring costs, as shown in shown in Table 8. The budget includes infrastructure telecommunications systems, the hardware necessary to use the infrastructure (e.g., servers, telehealth peripheral devices) and the software necessary to use the hardware. The total cost of the pilot project over its two year life is $11,321,199.

Table 9. Recurring Costs in Year 2

Recurring Costs Year 2	ARC	MRC	Annual Cost
Project Management	$125,000	$10,417	$125,000
Network Management	$125,000	$10,417	$125,000
Onsite Support	$125,000	$10,417	$125,000
Administrative Support	$80,000	$6,667	$80,000
FLR Access	$50,000	$4,167	$50,000
Internet Access		$3,000	$36,000
CALEA Compliance		$800	$9,600
WI-MAX Tower Lease		$7,200	$86,400
POP Utilities		$4,500	$54,000
POP Insurance		$2,250	$27,000
Outside Plant Management	$75,000	$6,250	$75,000
Monthly Outside Plant Inspection		$1,105	$13,255
Meeting With Local/State Utilities Two (2) Days Monthly		$1,094	$13,122
Underground Locations Two (2) Per Community		$1,885	$22,620
Underground Locations Tickets Four Per Community		$350	$4,200
Pre-Construction Meeting With Local/State Utilities (2) Monthly		$1,049	$12,588
Utilities Pole Transfer (Pole Change out) Three (3) Monthly		$950	$11,400
Fiber Damage One (1) Per Month		$2,390	$28,680
Pole Attachment Fees, est. 4,666 Poles@ $25.00	$116,662	$9,722	$116,662
Sub Total		$84,627	$1,015,527
10% Budget Margin		$8,463	$101,553
Total Monthly Recurring Cost		**$93,090**	**$1,117,080**
Average MRC Per Community		$10,343	$124,120

10) Indicate how the telemedicine program will be coordinated throughout the state or region.

Big Bend Regional Healthcare Information Organization will be responsible for provider relations and on-going administration of the project. The Agency for Health Care Administration will evaluate the results of the project and the feasibility of extending the project to other regions of the state. The Office of Rural Health in the Department of Health will engage its network of rural providers to work with the pilot project. The Florida Hospital Association will coordinate the broadband connections with each of the rural hospitals.

The ability of providers to connect to the Florida Health Information Network is of great value to the success of the network, which will depend on the mutual exchange of health care records among its participants. However, none of the pilot money will be spent on the Florida Health Information Network itself, the FHIN is being funding through other resources.

As proposed, the Florida Health Information Network infrastructure will be built around a centralized architecture that will maintain connectivity among RHIOs or other health information networks in the state, health care providers and will make use of the existing connectivity and data storage capability of health care systems whenever possible. The Florida Health Information Network will facilitate communications and data queries among the RHIOs, act as a central communication link in the state for health information exchange and will be responsible for providing access for authorized users to clinical data stored in databases across the state.

The Agency for Health Care Administration is the lead agency assigned to develop and implement the Florida Health Information Network.

11) Indicate to what extent the network can be self-sustaining once established.

A key objective of the project is to establish a self-sustaining operational model that balances the benefits and costs of the network on all participants including urban providers, rural providers and the private sector. The network will be sustained by the revenues generated by user fees for services which will be established by the Big Bend RHIO.

Just as health care in general struggles to provide financial sustainability, so do emerging regional health care information organizations (RHIOs). RHIOs are diligently working to facilitate electronic health information exchange between disparate provider systems predominately in urban areas. The two main areas of concern for these organizations are privacy and financial sustainability. Even as privacy and security issues are worked out, without financial viability RHIOs can't survive. Currently only a very few RHIO efforts have claimed any level of sustainability. The majority are still admittedly, and openly, looking for sustainable models.

It is widely understood that urban health care providers have limited resources to invest and support next generation technology, and rural providers have virtually none. While the private sector in rural communities may be small, addressing their needs for broadband and next generation services can generate sufficient revenues to substantially subsidize rural health care. Additionally, by bringing advanced services to the entire community significant overall economic revitalization and development can occur.

In a recent study on the economic benefits of building and operating a municipal broadband network, the authors cite a federal government report that notes for every dollar invested in broadband, the economy generated by the connectivity equals three dollars. The authors

conclude that the Florida county under study "experienced 128% growth over it peers since the municipal broadband network was built" in 2001.[3]

If advanced services are provided only to the health care providers then the community itself will likely have limited ability to provide adequate and ongoing support for its local health care system. For sustainability of a rural health care network beyond the pilot program we must provide the same advanced services to the entire community. This will provide for community wide economic revitalization which is crucial to the success of these health care systems.

It is the opinion of the applicants that sustainability of rural health care technology and related infrastructure can only be achieved by leveraging public / private partnerships. An example of this is already producing significant results for the Big Bend RHIO and its urban stakeholders. The Big Bend RHIO and ElectroNet, a private communications carrier identified and began implementing a business model where sustainability has truly been achieved and ongoing since 2004. The model leverages the specific needs of health care providers and the private sector to subsidize and support each other.

In 2003 ElectroNet constructed a gigabit Metro Ethernet private broadband network to serve the specific needs of the Leon County medical community. The network has become known as the private Medical Area Network or pMAN. The pMAN began by connecting several providers to facilitate transfer of radiological images. The network provides radiologists with real-time access to images from multiple locations and multiple imaging centers including their homes. The network now provides inter office transport for providers with multiple locations, Internet access with centralized VPN, firewall, security and intrusion detection and is the platform for the Big Bend RHIO regional health information network (RHIN) prototype project. To further enhance security only legitimate health care organizations are connected to the pMAN portion of the network.

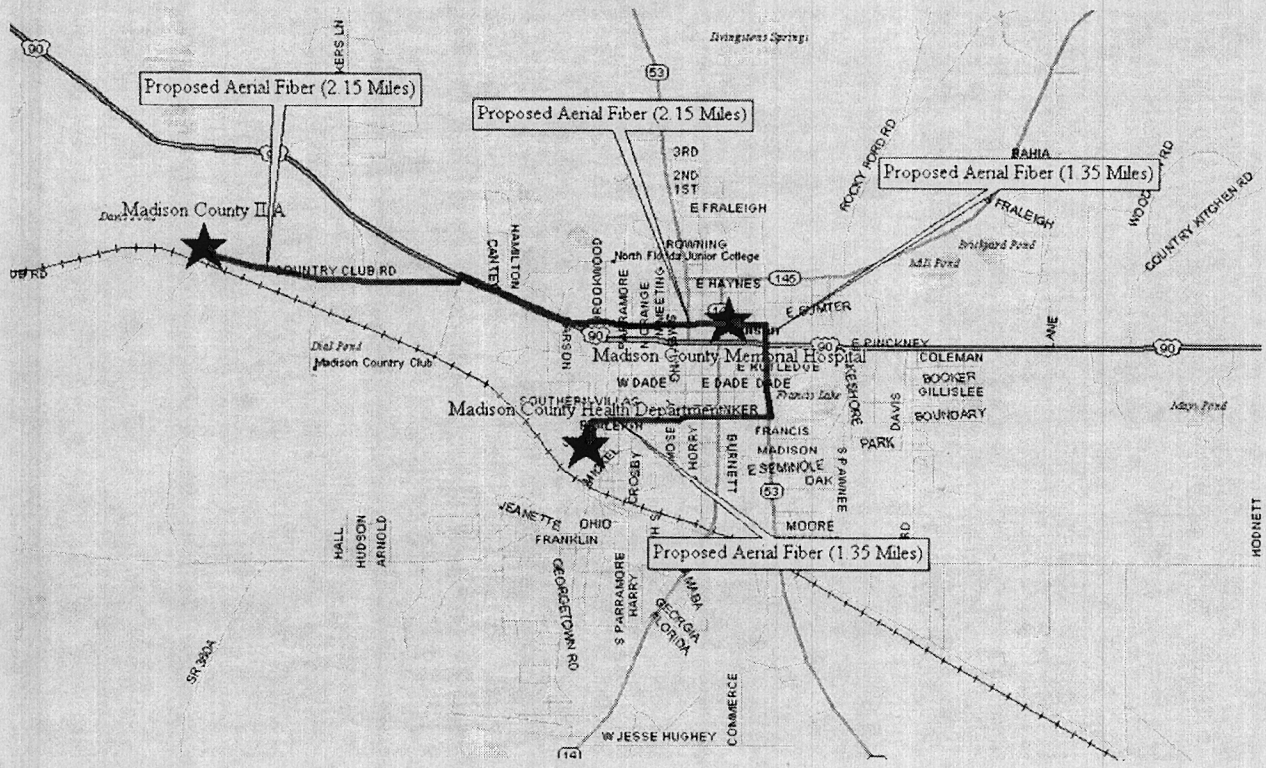
This sustainability was dependant upon leveraging a portion of the facilities constructed for the pMAN to deliver advanced services to the private non health care sector. By combining the needs of both health care and private enterprise a sustainable business model has been achieved. The partnership between ElectroNet and the Big Bend RHIO has created an environment where the Big Bend RHIO can provide its suite of services over the pMAN infrastructure at a very reasonable cost with minimal to no capital expense. This model of a regional health information network (RHIN) has created significant value to the Big Bend RHIO and its stakeholders and will provide for accelerated Big Bend RHIO sustainability.

The rural providers in our region are also stakeholders of the Big Bend RHIO. Patients from these communities are referred to the Big Bend RHIO urban specialty providers which create the need to connect them to the Big Bend RHIN and the urban specialty providers to exchange information. Because the pMAN already provides connectivity for many of the urban specialist, 100 % of the cost of connecting the rural communities to these providers will be carried by the Big Bend RHIO.

The proposed solution is to construct mini-pMANs in each of the proposed rural communities and connect them back to the Tallahassee pMAN. This would provide each of the rural community participants with direct connectivity to all urban pMAN participants, all other rural community participants, National Lambda Rail, Internet2 and the public Internet. An example of a mini-pMAN, as it would be constructed in Madison, Florida, is shown in Figure 4. In this map the connections to the LambdaRail are shown, as is the route of aerial fiber to the Madison hospital.

[3] Ford, G. and T. Koutsky (April 2005). Broadband and economic development: a municipal case study from Florida. Applied Economic Studies, April 2005. p. 15.

Figure 4. Route of Aerial Fiber for mini-pMAN in Madison, Florida



The dedicated rural networks (mini-pMANs) would be constructed of multi strand aerial fiber to provide gigabit Metro Ethernet capability in each of the communities and backhauled by a gigabit connection to the FLR. The Metro Ethernet network would be securely architected to provide services to the private sector as well. Services to both the public and private health care providers would include those that their urban counterparts currently enjoy. By bundling and deploying a suite of advanced services to the entire community, an economy of scale can be achieved creating a sustainable environment. This plan is focused on the future needs for broadband, and on providing appropriate health information exchange solutions at a reasonable cost.

Although on the surface construction of new rural networks may seem capital intensive and more complex than purchasing existing incumbent solutions, this is far from the case. A project of state or regional scale is spread over multiple LATAs, carriers and different legacy systems. Creating a manageable and sustainable dedicated next generation broadband network with existing rural facilities from multiple carriers is nearly if not impossible. This particular regional project is spread over three LATAs and four different incumbent carriers.

After researching the existing carrier infrastructure opportunities to create a dedicated network in our region it was determined that a sustainable network cannot be constructed using existing carrier facilities. Most of the proposed region is limited to 155mb OC3 capacity circuits (with one limited to 45mb DS3) with costs ranging from $31,000 to 73,000 per month for a single managed OC3 (155mb) connection or interface. The proposed pilot project would accomplish the same connectivity at a monthly cost of $10,343.

Second Year Financial Sustainability

Several funding streams are being developed to support the project in its second year. These include private-sector, state rural economic development, foundation, in-kind, and emergency preparedness/response support to help defray the costs for maintenance and operation of the network.

Private Sector Support:

Includes health clinics, primary and specialty physician practices, small and medium sized businesses, regional telecommunication companies, and housing developers[4]. These efforts will be spearheaded by the Agency for Health Care Administration, the Big Bend RHIO, the Governor's Office of Tourism, Trade, and Economic Development (OTTED) Rural Economic Development Initiative (REDI), Enterprise Florida (the states primary economic development organization), Tallahassee Economic Development Council, Opportunity Florida, the Florida's Great Northwest and the City of Port St. Joe.

Rural Economic Development:

The OTTED/REDI program provides a variety of rural economic development funding including. Enterprise Florida, Opportunity Florida, and the Florida's Great Northwest will provide regional and local technical assistance to support these programs.

Rural Development Grants:

Rural development grants could provide $100,000 for each project year for local government support which will tie to the health care and optical network through the Big Bend Regional Health Information Organization (RHIO) for a total of $200,000.

Business Enterprise Grants:

Business enterprise grants, through Florida's Community Development Block Grant (CDBG), could provide $35,000 for each new job created. The project will create 8 new positions for a total of $280,000 in support.

Community Contribution Tax Credit Program:

The Community Contribution Tax Credit Program could provide an additional 50% tax credit above their standard business deduction for cash or material donations to the project.

Rural Economic Development Loan Program:

The Rural Economic Development Loan Program could provide low interest loans to local governments participating in this project with very generous terms and marginal interest rates.

Foundations:

The Progress Energy Foundation (the major electric utility company in the region) foundation has expressed interest in providing financial support for this project. We are in the process of contacting other foundations such as the St. Joe Foundation, Progress Energy Foundation, and the Jessie Ball DuPont Foundation for second year support.

In-Kind:

Project management is provided by the Agency for Health Care Administration and the Big Bend Regional Health Information Organization. Health care provider outreach and support is offered by the Florida Department of Health's State Office of Rural Health and the Florida

[4] New housing developments are growing at a rapid pace throughout the panhandle coastal region in counties covered by this project. These developments do not have broadband access.

Hospital Association. Telehealth support is offered by the Florida Department of Health's Children's Medical Services and the Community Health Informatics Organization. Continuing economic development work is offered by the Governor's Office of Tourism, Trade, and Economic Development and Rural Economic Development Initiative, Enterprise Florida, Opportunity Florida, Florida's Great Northwest, and Florida WorkForce Plus (which has offered in-kind support at $75,000).

Emergency Preparedness/Response:

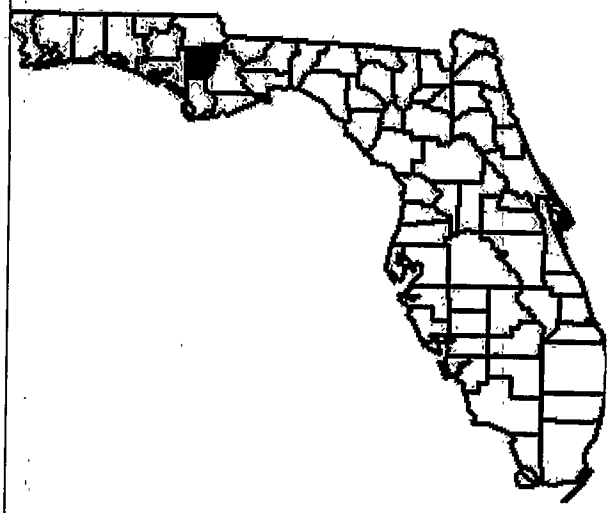
Through support of the Governor's Office of Tourism Trade and Economic Development (OOTED), the project is exploring access to Federal Emergency Management Agency mitigation funds.

Appendix A

County Profiles

Calhoun County

County Seat: Blountstown
Nearest MSA: Panama City MSA
Largest Cities: 1 Blountstown
2 Althea



Health Care

No. of Licensed Practitioners:	479
Calhoun-Liberty Hospital	
Total Beds:	36
Patients Admitted 2005:	577
Emergency Dept. Visits 2005:	5,713
Calhoun County Public Health	

Population

	Calhoun	Florida
1980	9,294	9,746,961
1990	11,011	12,938,071
2005	13,290	17,789,864
2015(p)	15,615	21,789,864
2030(p)	17,701	26,419,200

Labor Force

(2005)
Labor Force: 5,023
Labor Force % of County Population: 37.8
Number in County Unemployed: 219
Unemployment Rate: 4.4%

Per Capita Personal Income

	Calhoun	Florida
2002	$16,871	$29,709
2003	$17,362	$30,128
2004	$17,980	$31,469

Quality of Life

Cost of Living - Price Level Index (2005)
Florida State Average = 100

	Sample
Total	90.25
Food	101.73
Health Care	87.85
Housing	79.40
Personal Goods & Services	96.10
Transportation	96.99

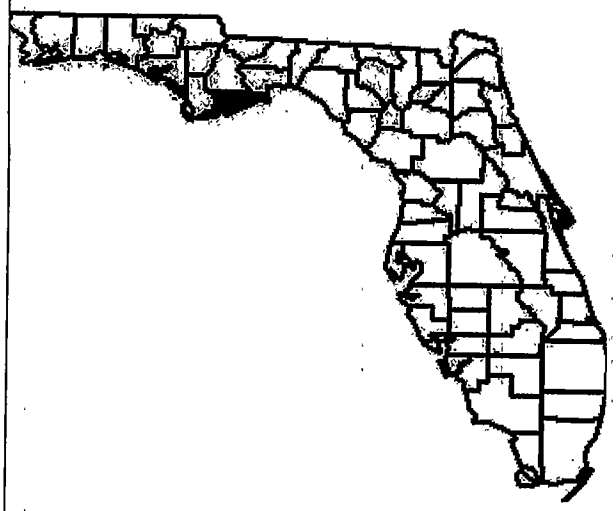
Migration

(2004)

In-Migration	359
Out-Migration	344
Net-Migration	15

Franklin County

County Seat: Apalachicola
Nearest MSA: Panama City MSA
Largest Cities: 1 Apalachicola
2 Carrabelle



Health Care

Number of Licensed Practitioners:	280
George Weems Memorial Hospital	
Total Beds:	29
Patients Admitted 2005:	438
Emergency Dept. Visits 2005:	5,838
North Florida Medical Centers	
Franklin County Public Health	

Population

	Franklin	Florida
1980	7,661	9,746,961
1990	8,967	12,938,071
2005	10,177	17,789,864
2015(p)	13,608	21,789,864
2030(p)	15,311	26,419,200

Labor Force

(2005)
Labor Force: 5,048
Labor Force % of County Population: 49.6
Number in County Unemployed: 202
Unemployment Rate: 4.0%

Per Capita Personal Income

	Franklin	Florida
2002	$21,900	$29,709
2003	$22,432	$30,128
2004	$24,102	$31,469

Quality of Life

Cost of Living - Price Level Index (2005)
Florida State Average = 100

	Sample
Total	94.25
Food	100.89
Health Care	104.38
Housing	85.46
Personal Goods & Services	97.23
Transportation	99.66

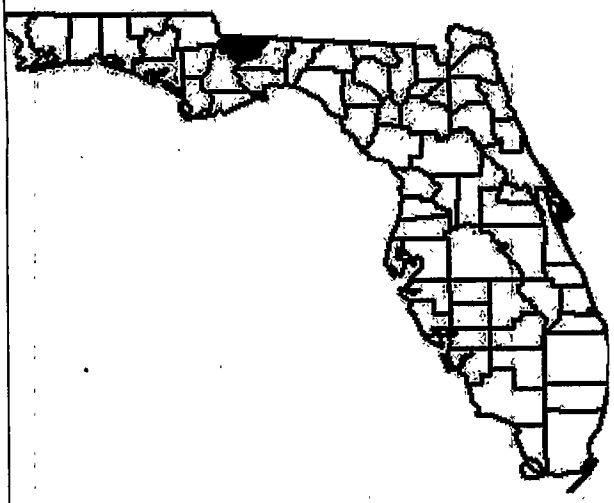
Migration

(2004)

In-Migration	666
Out-Migration	474
Net-Migration	192

Gadsden County

County Seat: Quincy
Nearest MSA: Tallahassee MSA
Largest Cities: 1 Quincy
2 Chattahoochee
3 Havana



Health Care

Number of Licensed Practitioners: 1,265

Gadsden Community Hospital

Total Beds:	39
Patients Admitted 2005:	55
Emergency Dept. Visits 2005:	N/A

North Florida Medical Centers
Quincy Medical Groups
Gadsden County Public Health

Population

	Gadsden	Florida
1980	**41,674**	**9,746,961**
1990	41,116	12,938,071
2005	46,658	17,789,864
2015(p)	51,833	21,789,864
2030(p)	56,376	26,419,200

Labor Force

(2005)
Labor Force: 20,728
Labor Force % of County Population: 44.4
Number in County Unemployed: 716
Unemployment Rate: 3.5%

Per Capita Personal Income

	Gadsden	Florida
2002	$20,223	$29,709
2003	$21,055	$30,128
2004	$21,916	$31,469

Quality of Life

Cost of Living - Price Level Index (2005)
Florida State Average = 100

	Sample
Total	89.79
Food	105.22
Health Care	81.65
Housing	94.99
Personal Goods & Services	98.06
Transportation	98.36

Migration

(2004)

In-Migration	1,859
Out-Migration	1,440
Net-Migration	419